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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/127,316	07/31/1998	TA YEN CHING		9973

7590

12/03/2001

Kenneth D. Goodman  
WILLIAMS, MORGAN & AMERSON P.C.  
7676 Hillmont, Suite 250  
Houston, TX 77040

EXAMINER

NOLAN, SANDRA M

ART UNIT	PAPER NUMBER
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1772

19

DATE MAILED: 12/03/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/127,316

Applicant(s)

CHING ET AL.

Examiner

Sandra M. Nolan

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 August 1001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 99-194 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 99-194 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on August 2, 2001 (Paper No. 18) has been entered.

### ***Claims***

2. Pursuant to entry of the amendment in Paper No. 18, claims 99-194 are pending.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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5. Claims 99-194 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ching et al (US 5,859,145) in view of Nordstrom (US 3,536,687).

Ching et al teaches the production of oxygen scavenging compositions (abstract) via the reaction of polymers having ethylenic backbones with compounds that yield pendant moieties containing cyclic allylic hydrogen (col. 17, lines 26+) via transesterification with metal salts (col. 20, lines 37+), which transesterification may take place in a melt blend (col. 23, line 64 through col. 24, line 35). Ethylene-methyl acrylate copolymers can be treated (col. 24, line 8). The moieties may be introduced via reaction with alcohols (see col. 19, line 43). Ching et al teaches films (col. 27, line 56) and multilayered articles (col. 28, line 49).

Ching et al does not teach the use of cyclohexenylalkyl (meth)acrylates or cyclohexenylalkyl alcohols as sources of the pendant allylic moiety.

Nordstrom teaches that cyclohexenylalkyl (meth)acrylates (Formula VIII at col. 2, lines 41+) can be copolymerized with methyl acrylate (col. 3, line 12) and other monomers to yield polymers that can be oxidatively crosslinked at ambient temperatures (col. 1, lines 49-52). Note that R<sub>1</sub> may be hydrogen (col. 2, line 52) and R may be an alkylene group containing 1 carbon atom (col. 2, line 51-52), so that the formula includes cyclohexenemethyl acrylate.

The Examiner takes official notice that "cyclohexenemethyl acrylate" and "cyclohexene-methylacrylate" [in Applicants' claim 185] are terms for the same molecule.

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Both patents deal with oxygen-reactive copolymers derived from acrylic monomers.

It would have been obvious to one having ordinary skill in the art at the time that the invention was made to employ the cyclohexenylalkyl (meth)acrylates of Nordstrom, or structurally analogous alcohols, as the source of the cyclic allylic hydrogen moiety taught by Ching et al as a component of their oxygen scavenging compositions and to make films, layers and articles therefrom (per Ching et al).

The motivation to employ the cyclohexenylalkyl (meth)acrylates of Nordstrom to make the pendant groups in the polymers of Ching et al is found at col. 1, lines 49-52 of Nordstrom where the oxidative crosslinkability of copolymers containing those groups is discussed. It is deemed desirable to employ oxidatively reactive groups in making the copolymers of Ching et al in order to assure their oxygen scavenging properties and to insure ambient temperature reactivity, which would lower the cost of products made therefrom.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 99-194 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication should be directed to the Examiner, Sandra M. Nolan, whose telephone number is 703/308-9545. The Examiner can normally be reached on Monday through Thursday, from 6:30 am to 4:00 pm, Eastern Time.

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If attempts to reach the Examiner by telephone are unsuccessful, her supervisor, Harold Pyon, can be reached at 703/308-4251. The general fax number for the art unit is 703/305-5436. The fax number for after final communications is 703/872-9310. The receptionist answers 703/308-0661.



S. M. Nolan  
Patent Examiner  
Technology Center 1700

SMN/smn  
November 22, 2001  
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